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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/789,215	02/27/2004	Linlin Xing	FDN-2829	9090

7590 12/07/2007
William J. Davis, Esq.
GAF MATERIALS CORPORATION
Legal Department, Building No. 10
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Wayne, NJ 07470

EXAMINER

COLE, ELIZABETH M

ART UNIT	PAPER NUMBER
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1794

MAIL DATE	DELIVERY MODE
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12/07/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/789,215	XING ET AL.	
	Examiner	Art Unit	
	Elizabeth M. Cole	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15, 21 and 22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15, 21 and 22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. In view of the appeal brief filed on 9/6/07, **PROSECUTION IS HEREBY REOPENED**. A new rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

/Terrel Morris/
Terrel Morris
Supervisory Patent Examiner
Group Art Unit 1794

2. Claim 22 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification as originally filed does not provide support for the limitation that polyurethane is a carboxylated polyurethane. Applicant points to paragraph 0036 as providing support,

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however, paragraph 0036 refers to aliphatic polyurethanes and then refers to particular trade names which are set forth in table 1, but paragraph 0036 does not provide support for the limitation "carboxylated polyurethane".

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-5, 8, 11, 15, 21, 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Kielbania et al, U.S. Patent No. 5,945,473. Kielbania et al discloses a binder composition suitable for use as binder for fiberglass, (col. 8, lines 39-44), comprising a water based polyurethane which may be either aliphatic or aromatic, (col. 3, lines 20-21), and an additional polymer, such as urea formaldehyde, (col. 7, line 36), wherein the water based polyurethane is present in an amount of 5-75 weight percent and the binder is present in an amount of 0.5-60 weight percent. Kielbania teaches that the combination of the water based polyurethane and the resin binder such as urea formaldehyde improves the properties of the resulting polymeric resin blend. See col. 2, lines 47- col. 3, line 17. The polyurethane can be a carboxylated polyurethane. See col. 4, lines 1-col. 6, line 32.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-15, 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kielbania et al, U.S. Patent No. 5,945,473 in view of Heine U.S. Patent No. 6,146,705. Kielbania et al discloses a binder composition suitable for use as binder for fiberglass, (col. 8, lines 39-44), comprising a water based polyurethane which may be either aliphatic or aromatic, (col. 3, lines 20-21), and an additional polymer, such as urea formaldehyde, (col. 7, line 36), wherein the water based polyurethane is present in an amount of 5-75 weight percent and the binder is present in an amount of 0.5-60 weight percent. Kielbania teaches that the combination of the water based polyurethane and the resin binder such as urea formaldehyde improves the properties of the resulting polymeric resin blend. See col. 2, lines 47- col. 3, line 17. Kielbania differs from the claimed invention because although Kielbania teaches using the resulting composition as a binder for use with glass fibers and fiberglass mats, Kielbania does not teach the particularly claimed fibers and amounts of fibers and binders, and does not specifically teach a roofing shingle material. Heine discloses a fibrous glass mat comprising fibers having a length of 1-1.5 inches and a diameter of 14-18 microns, (see col. 2, lines 35-44) which are bonded with a urea formaldehyde binder. The binder is present in an amount of 5-15% by weight. The mat can be used as a shingle and can have asphalt applied to it after formation. See col. 4, lines 1-27. It would have been obvious to one of ordinary skill in the art to have employed fibers having the size and in the amount taught by Heine in order to form a roofing material which is bonded with the binder composition of Kielbania, in order to take advantage of the improved properties which are obtained by the mixture of the water based polyurethane and the urea formaldehyde as taught by Kielbania.

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7. Applicant's arguments are persuasive with regard to the rejection of the claims over Heine in view of Hawkins, and therefore that rejection is withdrawn. A new rejection is set forth above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth M. Cole whose telephone number is (571) 272-1475. The examiner may be reached between 6:30 AM and 6:00 PM Monday through Wednesday, and 6:30 AM and 2 PM on Thursday.

Mr. Terrel Morris, the examiner's supervisor, may be reached at (571) 272-1478.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

The fax number for all official faxes is (571) 273-8300.

/Elizabeth M. Cole/
Primary Examiner, Art Unit 1794

e.m.c